



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Adress: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| | | | | |
|---|-------------|----------------------|---------------------|------------------|
| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
| 10/062,799 | 01/31/2002 | Valene Skerpac | | 3395 |
| 7590 | | 07/13/2011 | EXAMINER | |
| Francis C. Hand, Esq. c/o Carella, Byme, Bain, Gilfillan, Cecchi, Stewart & Olstein 6 Becker Farm Road Roseland, NJ 07068 | | | DAVIS, ZACHARY A | |
| | | ART UNIT | PAPER NUMBER | |
| | | 2492 | | |
| | | MAIL DATE | DELIVERY MODE | |
| | | 07/13/2011 | PAPER | |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

**Advisory Action
Before the Filing of an Appeal Brief**

| | | |
|------------------------|---------------------|--|
| Application No. | Applicant(s) | |
| 10/062,799 | SKERPAC, VALENE | |
| Examiner | Art Unit | |
| Zachary A. Davis | 2492 | |

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 23 June 2011 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

a) The period for reply expires 3 months from the mailing date of the final rejection.
 b) The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
 (a) They raise new issues that would require further consideration and/or search (see NOTE below);
 (b) They raise the issue of new matter (see NOTE below);
 (c) They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 (d) They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).

5. Applicant's reply has overcome the following rejection(s): _____.

6. Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

7. For purposes of appeal, the proposed amendment(s): a) will not be entered, or b) will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____.

Claim(s) objected to: _____.

Claim(s) rejected: _____.

Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).

9. The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).

10. The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See Continuation Sheet.

12. Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). _____

13. Other: _____.

/Zachary A Davis/
Primary Examiner, Art Unit 2492

Continuation of 11. does NOT place the application in condition for allowance because: Applicant's arguments are not persuasive.

Regarding the rejection of Claims 1, 2, 4-8, 11, 14, and 16-18 under 35 U.S.C. 103(a) as being unpatentable over Hattori, US Patent 6094632, in view of Higgins et al., "Speaker Verification Using Randomized Phrase Prompting", and with specific reference to independent Claim 1, in response to applicant's arguments against the references individually (pages 1-2 of the present response), one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). More specifically, Applicant separately argues that Hattori does not disclose generating one-time challenge phrases because, according to Applicant, Hattori does not disclose how the specified text is generated, and because the password is not random (pages 1-2 of the present response). However, even assuming arguendo that the above assertions are correct, Higgins was relied upon for disclosure of a database having a plurality of words and language rules for randomly generating one-time challenge phrases where each word of the phrase is randomly generated, as claimed.

Further with respect to Higgins, Applicant argues that the speech material in Higgins only includes 24 phrases from which the prompted phrases are selected, but that Higgins does not disclose generation of phrases wherein each word of the phrase is randomly generated (pages 2-3 of the present response). Applicant specifically states that Higgins teaches "that it is only from these 24 phrases that an individual will be asked to utter a phrase for verification purposes" (page 3 of the present response) but provides no evidence whatsoever in support of this statement. Further, the Examiner respectfully submits that this is an incorrect interpretation of the disclosures of Higgins. In particular, although Higgins does disclose that enrollment of a user requires speaking 24 phrases of three two-digit numbers each (page 90, section 2), Higgins does not disclose that the phrases generated for subsequent verification sessions must be selected from the 24 phrases that the user enrolled with. Rather, Higgins discloses that the prompted phrases are generated at random from the entire possible set of $56^3=175,616$ phrases. In particular, Higgins states that there are 56^3 phrases and that "A verification trial or session consists of four such phrases" (page 90, section 2). This clearly does not limit the prompted phrases for the verification sessions to be selected from a subset of the phrases; rather, any of the 175,616 can be generated at random for verification trials. Again, this is further supported by the description in Higgins of how verification is performed, as detailed in the previous Office action (see Higgins, page 92, section 3.3.1, second paragraph; page 91, section 3.2, second paragraph; and pages 95-97, section 3.4). Higgins therefore discloses nothing to suggest that only the 24 phrases used in enrollment can be used in subsequent verification trials.

Applicant further argues that modifying Hattori "to include the random phrase generation of Higgins would mean that an individual would be required to speak a specified text" that is selected from one of 24 prerecorded phrases" and that because of this the proposed modification would not result in the claimed structure (pages 3-4 of the present response). First, as noted above, Higgins does not disclose that only the 24 phrases used for enrollment can be used for verification, but that any phrase from the vocabulary, i.e. the set of 56³ possible phrases, can be generated at random for a given verification trial. Further, in response to applicant's argument that modifying Hattori would mean requiring a user to speak a specified text from prerecorded phrases, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). Applicant additionally argues that modifying Hattori to process the entire signal for speaker and speech recognition, as taught by Higgins, would change the principle of operation of Hattori, allegedly because it "would eliminate the teaching of Hattori of combining two types of verification together" noting that Hattori teaches text (or speech) verification and speaker verification (page 4 of the present response). However, because Higgins also discloses performing both speaker recognition (i.e. speaker verification) and speech recognition (see Higgins, pages 92-95, section 3.3. "Verification", as previously cited, where it is determined whether the claimant was speaking, i.e. speaker recognition is performed, and whether the input utterance was spoken as prompted, i.e. speech recognition is performed to determine whether the exact challenge phrase was spoken), it is not clear how the teaching in Higgins of performing both speech recognition and speaker recognition could eliminate Hattori's use of text verification and speaker verification. The systems of Hattori and Higgins each use both speech (or text) recognition and speaker recognition, and therefore Applicant's argument that this would change the principle of operation of Hattori is not appreciated.

Applicant further argues that the challenge phrases in Higgins cannot be one-time challenge phrases because there is a possible set of 175,616 phrases and "a one-time challenge phrase is defined as one that does not repeat" (page 5 of the present response). However, the Examiner notes that Applicant has not explicitly defined "one-time challenge phrase" in the present specification. Further, for there to be a guarantee that a phrase will never be repeated, there must be an infinite number of possible phrases; otherwise, there will always be some finite probability that a phrase could be repeated. It is well-known that, for purposes of security, any random number to be used as a one-time challenge (and, by various encoding schemes, including, without limitation, ASCII and Unicode, any phrase can be represented as a number) is considered to be sufficiently "one-time" or secure as long as the probability of a value repeating is sufficiently low. For example, see Menezes, *Handbook of Applied Cryptography* (in particular, section 10.3.1, pages 397-400, and more specifically, remark 10.11, page 399). This matches what is described in Higgins, where, for security, "prompts [i.e. challenge phrases] should be chosen at random from a large number of possibilities" (Higgins, page 89, section 1, first paragraph) and that an imposter cannot know in advance the phrase that will be prompted (Higgins, page 90, section 2). Additionally, it is noted that Applicant's specification also discloses a limited number of possible phrases (see, for example, page 11, lines 9-12, of the specification as originally filed, where a minimum of 1000 phrases are used). As Applicant contemplated a smaller number of phrases than that disclosed by Higgins, it appears that Applicant's assertion that a one-time challenge phrase does not repeat also contradicts the present specification.

Applicant also argues that Higgins shows enrollment using specific words and that "Applicant does not require specific words or text for speaker recognition enrollment or verification" (page 6 of the present response). However, it is noted that the claims recite no

requirements relating to enrollment of users and therefore they do not exclude using specific words for enrollment.

Applicant again states that Hattori does not describe how the specified text is generated (page 6 of the present response); however, again, it is noted that Higgins was relied upon for disclosure of a database having a plurality of words and language rules for randomly generating one-time challenge phrases where each word of the phrase is randomly generated, as claimed. Applicant also repeats that Higgins "selects 1 of 24 previously programmed phrases" and also argues that "the previously programmed phrases... do not constitute a plurality of words and language rules" (page 6 of the present response). However, first, it is again noted that there is nothing in Higgins that limits challenge phrases to the 24 phrases used for enrollment, as detailed above, and second, at least Higgins does disclose a database having a plurality of words and language rules for randomly generating one-time challenge phrases as claimed (see Higgins, page 90, section 2, as previously cited, where phrases are generated at random, from a plurality of words, i.e. the two-digit numbers, subject to syntactic constraints, i.e. based on language rules).

Regarding independent Claims 2, 4, 5, 16, and 17, and the claims depending therefrom, Applicant generally refers back to and/or repeats the arguments presented with respect to independent Claim 1 (see pages 6-8 of the present response), which have been addressed above.

Regarding dependent Claim 18, Applicant again argues that Hattori does not disclose a plurality of words and language rules in a plurality of language sets as claimed, based on the allegation that Hattori only discloses a specific text of "December the twenty-fifth" (see page 8 of the present response, citing Hattori, column 9, lines 63-64). However, the Examiner submits that additional portions of Hattori do disclose the plurality of words and rules in a plurality of language sets as claimed (see, for example, Hattori, column 9, lines 19-47; column 8, line 65-column 9, line 5; column 9, lines 61-64, words and phrases in English; see also column 11, lines 18-37, disclosing use of Japanese language; the two languages are clearly different language sets having different words and rules).